Remarks

Applicant has canceled non-elected claims and has amended claim 29 to recite specifically the compound DAPH1 (4,5-dianilinophthalimide). Support for the amendment is found throughout the specification, for example in the Figure descriptions (and corresponding figures), and in the Examples, particularly Tables 2-4. No new matter has been added.

Claim 34 remains in the case (presently withdrawn from consideration) as Applicant believes that this claim should be rejoined upon allowance of claim 29. Applicant respectfully requests that the Examiner reconsider rejoining the claim in connection with the allowance of claim 29.

Applicant has added new claim 49 to recite NBQX as the claimed compound that decreases calcium influx of neuronal cells caused by aggregated β-amyloid (Aβ) protein degradation products. Support is found in the specification at page 17, lines 1-2; thus, no new matter has been added. NBQX is the species presently elected for prosecution. Applicant respectfully reserves the right to add additional claims upon allowance of the claims directed to the elected species.

Rejections Under 35 U.S.C. § 112, First Paragraph

The Examiner rejected claim 33 under 35 U.S.C. § 112, first paragraph, as lacking an adequate written description in the specification. Applicant respectfully traverses the rejection.

Claim 33 as amended recites a combination of DAPH1 and one or more compounds that decreases calcium influx of neuronal cells caused by aggregated β-amyloid (Aβ) protein degradation products. Applicant asserts that DAPH1 is described in the application and therefore satisfies the written description requirement.

Likewise, the specification provides an adequate written description of compounds that decrease calcium influx of neuronal cells caused by aggregated β-amyloid (Aβ) protein degradation products, at least because the application provides a representative number of such compounds. For example, the application recites a number of decoy peptides (see, e.g., pp. 9, 16), a number of non-NMDA antagonists (see pp. 16-17), and other antagonists of calcium channels (p. 16) including NMDA antagonists such as DL-AP5 (see Example 1, p. 30). Decoy peptides, NMDA antagonists and non-NMDA antagonists are well known and art-recognized

classes of compounds that inhibit NMDA or non-NMDA channels. Thus, even though there may be structural differences among various compounds recited in the application, given the knowledge in the art of these compounds Applicants have provided a representative number of compounds in satisfaction of the written description requirement. The Regents of the University of California v. Eli Lilly and Company, 119 F.3d 1559, 1569 (Fed. Cir. 1997).

Moreover, the Examiner recognizes that the prior art describes such compounds (Ingram PCT application WO98/30299), and thus one of ordinary skill in the art would not need an extensive description in the specification (although adequate description certainly is provided) in order to recognize that Applicant was in possession of the claimed invention.

Therefore, the specification provides sufficient description to convey to one of ordinary skill in the art that Applicant invented the claimed invention. Vas-Cath v. Mahurkar, 35 F.2d 1555, 19 USPQ2d 1111 (Fed. Cir. 1991) (written description requirement requires that the claimed invention must be described clearly enough to allow one of ordinary skill in the art to recognize that the inventors invented the claimed invention).

Accordingly, Applicant's specification provides an adequate written description of claim 29 as presently amended. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph therefore is requested.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claim 29 under 35 U.S.C. § 103 as unpatentable over Buxbaum (US 5,385,915) alone and further in view of Ingram (US 2003/0114510A1). Applicant notes that the Ingram application, cited by the Examiner as evidence of inherency, is a continuation-in-part of the instant application.

The Examiner asserts that Buxbaum teaches tyrphostin as a kinase inhibitor and glutamate as a calcium modulator. The Examiner also states that Ingram provides evidence of the inherency of these compounds as decreasing membrane depolarization and neuronal calcium influx, respectively.

Applicant notes that the Ingram application is not prior art to the instant application, and accordingly should not serve as evidence of inherency of these compounds, since the effect of tyrphostin (the compound cited by the Examiner) on membrane depolarization, is Applicant's discovery. Citing Applicant's own later-filed application as evidence of inherency of

Applicant's own invention should not be a sufficient basis for an obviousness rejection as made here.

Although Applicant disagrees with the rejection, for the reason noted above and also in view of the species election required of the Applicant for examination purposes, Applicant has amended claim 29 to focus the subject matter of the claimed invention on the combination of DAPH1 and compounds that decrease neuronal calcium influx.

Buxbaum does not teach DAPH1, and at least for this reason, Applicant respectfully requests that the rejection of claim 29 as being unpatentable under 35 U.S.C. § 103 be withdrawn.

The Examiner rejected claim 29 under 35 U.S.C. § 103 as unpatentable over Buxbaum (US 5,385,915) in view of Ingram (US 2003/0114510A1) as applied above, and further in view of Sharpe et al. (US 6,552,066).

As noted above, the Examiner cites the Ingram application as evidence of inherency of tyrosine kinase inhibitors as useful in decreasing membrane depolarization, and therefore in treating Alzheimer's disease. This recognition is part of Applicant's invention described in the instant application. Citing Applicant's own continuation-in-part application as providing the connection to two compounds, in Buxbaum alone as in the previous rejection or in Buxbaum and Sharpe as here, is improper. Thus there is no legally sufficient motivation to select the specific claimed compounds as claimed by Applicant, or to combine the cited references.

Moreover, the Examiner's assertion regarding the functional equivalency of DAPH1 and other tyrosine kinase inhibitors is too broad. While DAPH1 and tyrphostin both are tyrosine kinase inhibitors, Sharpe only teaches or suggests to one of ordinary skill in the art that these compounds are functionally equivalent for inhibiting tyrosine kinase activity, not anything else.

Accordingly, Applicant respectfully requests that the rejection of claim 29 as being unpatentable under 35 U.S.C. § 103 be withdrawn.

The Examiner rejected claim 29 under 35 U.S.C. § 103 as unpatentable over Buxbaum (US 5,385,915) alone and further in view of Ingram (US 2003/0114510A1), and further in view of Ingram WO 98/30229. Applicant notes that the Ingram US published application, cited by the Examiner as evidence of inherency, is a continuation-in-part of the instant application.

The Examiner acknowledges that Buxbaum may fail to explicitly teach compositions that decrease neuronal calcium influx by β-amyloid degradation products. The Examiner cites the Ingram PCT application as teaching decoy peptides and non-NMDA channel antagonists as compounds that decrease neuronal calcium influx by β-amyloid degradation products.

Applicant traverses this rejection because (1) Buxbaum fails to teach DAPH1, (2) the use of Ingram US 2003/0114510A1 as evidence of inherency is improper as described above, and (3) there is no motivation for one of ordinary skill in the art to select and combine the claimed compounds without the benefit of Applicant's disclosure, i.e., this rejection is based on hindsight. Without more, one of ordinary skill in the art in reading the Buxbaum patent would not be motivated to combine a compound as taught by Buxbaum (which is not DAPH1, as claimed or as elected as a species for examination) with another compound as taught by the Ingram PCT application..

Accordingly, Applicant respectfully requests that the rejection of claim 29 as being unpatentable under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Applicant respectfully requests reconsideration of the claims in view of the amendments and reasoned statements made above. If the Examiner wishes to expedite the prosecution, or if the amendment is defective or unclear, then the Examiner is invited to telephone the undersigned at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
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